SEOUENCE LISTING

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Val His Asn Val Trp Ala Thr His Ala Cys Val Pro Thr Asp Pro Asn
65
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                                         75
Pro Gln Glu Val Val Leu Val Asn Val Thr Glu Asn Phe Asn Met Trp
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Lys Asn Asp Met Val Glu Gln Met His Glu Asp Ile Ile Ser Leu Trp
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                                                     110
Asp Gln Ser Leu Lys Pro Cys Val Lys Leu Thr Pro Leu Cys Val Ser
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450

460

Ile Phe Arg Pro Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu 475 470 Leu Tyr Lys Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro 490 485 Thr Lys Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala Val Gly 505 Ile Gly Ala Leu Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met 520 515 525 Gly Cys Thr Ser Met Thr Leu Thr Val Gln Ala Arg Gln Leu Leu Ser 535 Asp Ile Val Gln Gln Asn Asn Leu Leu Arg Ala Ile Glu Ala Gln 555 Gln His Leu Gln Leu Thr Val Trp Gly Ile Lys Gln Leu Gln Ala 570 Arg Ile Leu Ala Val Glu Arg Tyr Leu Lys Asp Gln Gln Leu Leu Gly 585 Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr Thr Ala Val Pro Trp Asn Ala Ser Trp Ser Asn Lys Ser Leu Glu Gln Ile Trp Asn Asn Met 610 Thr Trp Met Glu Trp Asp Arg Glu Ile Asn Asn Tyr Thr Ser Leu Ile 625 630 635 His Ser Leu Ile Glu Glu Ser Gln Asn Gln Gln Glu Lys Asn Glu Gln 645 650 Glu Leu Leu Glu Leu Asp Lys Trp Ala Ser Leu Trp Asn Trp Phe Asn 665 Ile Thr Asn Trp Leu Trp Tyr Ile Lys Leu Phe Ile Met Ile Val Gly 675 Gly Leu Val Gly Leu Arg Ile Val Phe Ala Val Leu Ser Ile Val Asn 695 Arg Val Arg Gln Gly Tyr Ser Pro Leu Ser Phe Gln Thr His Leu Pro 715 710 Ile Pro Arg Gly Pro Asp Arg Pro Glu Gly Ile Glu Glu Gly Gly Glu Arg Asp Arg Asp Arg Ser Ile Arg Leu Val Asn Gly Ser Leu Ala 745

Leu Ile Trp Asp Asp Leu Arg Ser Leu Cys Leu Phe Ser Tyr His Arg
755 760 765

Leu Arg Asp Leu Leu Leu Ile Val Thr Arg Ile Val Glu Leu Leu Gly 770 780

Arg Arg Gly Trp Glu Ala Leu Lys Tyr Trp Trp Asn Leu Leu Gln Tyr 785 790 795 800

Trp Ser Gln Glu Leu Lys Asn Ser Ala Val Asn Leu Leu Asn Ala Thr 805 810 815

Ala Ile Ala Val Ala Glu Gly Thr Asp Arg Val Ile Glu Val Leu Gln 820 825 830

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<213> Artificial Sequence

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<220>

<221> misc_feature

<222> (97)..(99)

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aaaac	and the second s	
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\Z13/	Architetar Sequence	
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<213> Artificial Sequence
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<223> Description of the artificial sequence: synthetic DNA
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<223> env ATG
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<221> misc_feature
<222> (1377)..(1379)
<223> env AGT, gp120 start
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<221> misc_feature
<222> (1397)..(1403)
<223> BstEII cleavage site
<220>
<221> misc_feature
<222> (3537)..(3542)
<223> BamHI cleavage site
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<221> misc_feature
<222> (3855)..(3857)
<223> env TAA, stop
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<211> 860
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<213> Human immunodeficiency virus
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<221> misc_feature
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<223> PI-932 original sequence V1-V2-V3-loop
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<210> 12
<211> 870
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<212> DNA

<213> Artificial Sequence

<220>

<223> Description of the artificial sequence: PI-932 gene cassette, comprising the cleavage sites for restriction enzymes BspTl, PstI, BclI, EcoRI, BglII, PvuII, XbaII, NheI

<400> 12

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